

TITLE: Weather Disasters

SUBJECT: Science

GRADE LEVEL: 9

NCDG



Content Standard	Science Standard: Students will identify and describe the atmospheric conditions related to weather systems. <ul style="list-style-type: none">Identify and describe the atmospheric and hydrospheric conditions associated with the formation and development of hurricanes, tornadoes and thunderstorms.
Career Development Domain	Personal Social Development
Career Development Goal	PS2 Develop positive interpersonal skills including respect for diversity.
Career Development Indicator	PS2.A4 Demonstrate the ability to get along well with others and work effectively in groups.

Lesson Objectives

- Students will participate in a cooperative learning project to identify and describe 1) the atmospheric and hydrospheric conditions associated with the formation and development of a specific weather-related disaster such as a hurricane or tornado and 2) report on its consequences.
- After completing the group project, students will document their skills for working in a group and how that affected their academic achievement.

Assessment

- Students will satisfactorily complete the group research project to identify and describe the atmospheric and hydrospheric conditions associated with the formation and development of a specific weather-related disaster such as a hurricane or tornado and report on its consequences.
- Students will participate appropriately in the cooperative learning project and complete the two group activity related worksheets.

CAREER DEVELOPMENT/ACADEMIC LESSON

LESSON ACTIVITIES

Preparation

- Accommodations — To adapt this activity for students with special needs, review the *Suggested Accommodations* section below.
- Prior Learning—Unit on Interactions of Hydrosphere and Atmosphere
- Handouts/Worksheets—*Tips for Working in a Group*, *Working in Groups Question Guide*, *Group Evaluation* worksheet
- Time Required—90 minutes, time for group presentations and homework

Procedures

- Begin the activity with a discussion of some recent weather-related disasters. What were they? Where were they located? Have you lived through a hurricane or tornado? What weather-related disasters might we face in our state?
- Divide the class into groups of 3-5 students. Give students the *Tips for Working in a Group* handout and review it with them.
- Explain to the class that each group will present a team project that documents a weather-related disaster (hurricane, tornado, or severe thunderstorm). Review the requirements for the project and the resources the students can use for their research.
- Encourage students to use various methods to display their documentation such as: newspaper articles, visuals, written report, the Internet and taped interviews.
- Have each group present its display to the class.

Career Development Connections

- After the project is completed, engage students in a discussion of what makes a team work well. What kinds of behaviors help the team accomplish its task? What kinds of behaviors hinder the work of the team? Is it easier to get a project done as part of a team, or is it easier to work alone?
- Have students discuss how working as a team can improve the quality of a project (e.g., new ideas, different points of view, special talents of each person). Show how the ability to work well on a team can affect academic achievement.
- Have students complete the *Working in Groups Question Guide* and the *Group Evaluation* worksheet.
- Remind students that the ability to work cooperatively in group activities is an important skill for their academic achievement now, as well as an important skill in the workplace.
- Optional: use the *Working in Groups Question Guide* and the *Group Evaluation* worksheet as artifacts in the student's career portfolio.

Suggested Accommodations

Although each situation is different and the student is the best source of information regarding useful accommodations, the following accommodations are typical for a student with specific disabilities. Many of the suggested accommodations are adapted from: *DO-IT*, University of Washington (Copyright © 2001-2004). Permission is granted to copy these materials for educational, noncommercial purposes provided the source is acknowledged. For more information visit <http://www.washington.edu/doi/Faculty/Strategies/Universal/>.

Typical Accommodations for Students with Asperger's Disorder and High-Functioning Autism

Learning activities that may be particularly challenging for students with Asperger's Disorder (also referred to as Asperger Syndrome) and high-functioning Autism include social interactions, noisy or disordered environments, intense sensory stimulation, and changes in expected routines. Many students with Asperger's Disorder or high-functioning Autism have difficulty using a pencil and paper for writing. Some have difficulty with organization and schedules. The following accommodations are suggested.

LESSON ACTIVITIES

- Clearly established and ordered routines
- Warning and preparation when changes are anticipated
- Planning and practicing communication strategies and social routines
- Earplugs or noise canceling headsets when in the hallways or lunchroom
- A quiet area where the student can take a time-out if necessary
- Visual schedules and graphic organizers
- Visual or written, rather than auditory, instructions
- Computer use, especially word processing for writing
- Notetaker

Typical Accommodations for Students with Cognitive Impairments

Cognitive impairments represents a range of students who experience from mildly to severely delayed intellectual functioning. The following accommodations are suggested.

- Seating in the front of the classroom to assist concentration and involvement in the class
- Visual, aural, and tactile instructional demonstrations
- Written supplement to oral instructions, assignments, and directions
- Tape recording lectures
- Notetaker for class lectures
- Unfamiliar vocabulary written on the board or a handout
- Training to use "scan and read" technology to supplement low reading skills
- Instruction presented in small, sequential steps with frequent review

Typical Accommodations for Students with Health Impairments

- Note taker
- Flexible attendance requirements and extra exam time
- Assignments made available in electronic format; use of e-mail to facilitate communication

Typical Accommodations for Students with Hearing Impairments

- Interpreter, real-time captioning, FM system, note taker
- Open- or closed-captioned films, use of visual aids
- Written assignments, lab instructions, demonstration summaries
- Visual warning system for lab emergencies
- Use of electronic mail for class and private discussions

Typical Accommodations for Students with Learning Disabilities

- Note takers and/or audiotaped class sessions, captioned films
- Extra exam time, alternative testing arrangements
- Visual, aural, and tactile instructional demonstrations
- Computer with voice output, spelling checker, and grammar checker
- Writing strategies
- Proofreading strategies
- Color-coded information
- Test-taking strategies
- Time management strategies
- Organizational strategies for reviewing research articles
- Videotaping for self-evaluation
- Role-playing practicum exam questions

CAREER DEVELOPMENT/ACADEMIC LESSON*

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LESSON ACTIVITIES

Typical Accommodations for Students with Mobility Impairments

- Note taker / lab assistant; group lab assignments
- Classrooms, labs, and field trips in accessible locations
- Adjustable tables; lab equipment located within reach
- Class assignments made available in electronic format
- Computer equipped with special input device (e.g., voice input, Morse code, alternative keyboard)

Typical Accommodations for Students with Psychiatric or Mental Health Impairments

- Notetakers
- Early notification of projects, exams, and assignments to reduce stress
- Flexible attendance requirements
- An encouraging, validating, academic environment
- Alternative testing arrangements in a quiet room
- Assignments available in electronic format
- Web page or electronic mail distribution of course materials and lecture notes

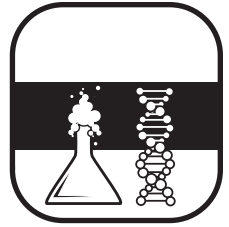
Typical Accommodations for Students with Vision Impairments

- Audiotaped, Brailled, or electronically formatted lecture notes, handouts, and texts
- Verbal descriptions of visual aids
- Raised-line drawings and tactile models of graphic materials
- Braille lab signs and equipment labels; auditory lab warning signals
- Adaptive lab equipment (e.g., talking thermometers and calculators, light probes, and tactile timers)
- Computer with optical character reader, voice output, Braille screen display and printer output
- Seating near front of class
- Large-print handouts, lab signs, and equipment labels
- TV monitor connected to microscope to enlarge images
- Class assignments made available in electronic format
- Computer equipped to enlarge screen characters and images

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Weather Disasters

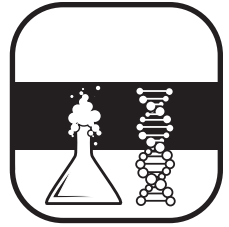


Tips for Working in a Group

1. Elect a group leader. This person should be organized, responsible and personable. The leader should encourage all students to participate.
2. Listen to each other. Everyone should have an opportunity to be heard.
3. Be organized. Brainstorm ideas and write them down. Be creative.
4. Research and gather information on your topic.
5. Solve problems in a diplomatic manner. Be fair.
6. Respect the feelings of other people in the group. Try to control tempers.
7. Demonstrate tolerance and flexibility in group situations. Negotiate with each other.
8. Communicate your ideas and feelings with each other.
9. Have a good time.



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NAME _____ DATE _____

Group Evaluation

Instructions: Answer the following questions.

1. What did you learn about working in a group?

2. What did you contribute to your group project?

3. Were there any disagreements within the group? If so, how were they resolved?

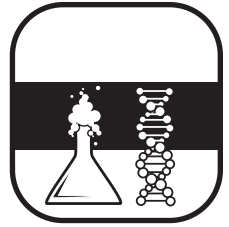
4. Do you like working in a group or do you prefer to work alone on a project?

5. Are you satisfied with the performance of your group members?

6. On a scale of 1 to 10, how would you rate your group's performance? Why?

CAREER DEVELOPMENT/ACADEMIC LESSON

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NAME _____ DATE _____

Working in Groups Question Guide

Instructions: Complete the following.

1. My job was...

2. As a team member I did...

3. I liked working with a team because...

4. I didn't like working on a team because...

5. The strengths that I brought to the group were...

6. I found the entire group experience to be...

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